

PERMIT CHECK LIST

The following people have reviewed the permit:

Reviewing Permit Writer: _____

Air Compliance Manager: _____

Date: Date

Source Name: NASA / Wallops Flight Facility Registration No.: 40909 Id. No.: 51-001-00031

Source Location: Route 798, Goddard Space Flight Center, Wallops Island Facility, Wallops Island, VA

Mail Address: Goddard Space Flight Center, Wallops Island Facility, Wallops Island, VA 23337-5099

Source Status: ☐ Greenfield ☒ Currently operating

Source Classification: ☐ Minor ☒ SynMinor ☐ State Major ☐ PSD Major ☐ TV Major

Permit Action: Addition of new equipment to allow for on-site generation of uninterrupted electrical services during pre-launch and post-launch activities as well as new boilers, etc.

☒ **Inspector Contacted Consulted**

Permit Action Program:

☐ NSR ☒ SOP ☐ TV ☐ Maj HAP ☐ General

Permit Action Type:

☐ Exemption

☐ New / Article 6 Modification (delete one) ☒ Significant Modification

☐ Minor Modification ☐ Administrative Amendment ☐ Renewal

☐ State Major ☐ PSD ☐ Non-Attainment ☐ General Permit

Y (Y/N) Permit Includes All Emission Units at Source.

Y (Y/N) Permit Allows Source to avoid Title V/MACT/etc.

After this permit, source is: ☐ Major (A) ☐ Minor (B) ☒ Synthetic minor (SM)
(NOx, CO, SOx Pollutant, HCl, Hydrazine HAPs)

Permit Application Review

☒ Permit application submitted, or ☐ Letter Request

Application Received Date: 5/8/12

Application Complete Date: 12/7/12

Permit Deadline Date: 3/7/12

☒ Document Certification Form received

n/a Confidential information with sanitized copy. If yes, which sections:

☐ throughputs ☐ individual pollutants ☐ flow diagrams ☐ calculations

☐ process descriptions ☐ other (describe)

If yes, has claim been accepted by DEQ? (Y/N) - Date of letter: _____

n/a Copy of letter from local official for greenfield, or major modified sources

n/a Copy of letter sent to FLM if applicable. (Comments)

n/a Notification of Affected State(s)

This permit supersedes permit(s) dated: November 16, 2010.

Regulatory Review

BACT Determination (check one):

☒ Fuel throughput limits for the control of NOx meets BACT (Comments) _____,
or

☐ TV/SOP/BACT not applicable. (Explain) _____

Y (Y/N) NSPS/MACT/NESHAPS Applicability: If Y, Subpart(s):

NSPS

✓ MACT ZZZZ

 NESHAPS

 N (Y/N) Existing Rules (9 VAC 5 Chapter 40) Applicability: If Y, Rule(s):

Toxic Pollutants (check one):

___ Exempt, or ___ in compliance with 9 VAC 5-60-320, or ✓ not evaluated (***Reminder: remember to change the regulation to 9 VAC 5-60-220 when doing a SOP for existing sources.***)

[Comments: _____]

Modeling (check one):

____ Attached (including background monitors), or

____ Copy of approval letter from modeling section,

✓ No modeling required by agency policy (< modeling significance levels, etc.)

Site Suitability:

✓ Site suitable from an air pollution standpoint, inspection date: 5/5/11, or no inspection required because _____.

✓ Calculation sheet(s) attached

<u>N</u> (Y/N) NSR Netting	Comments (Explain Permit History):
----------------------------	------------------------------------

 N (Y/N) (CAM) Compliance Assurance Monitoring Applicable

Permit includes: ☐ Stack Testing ☐ CEM ☐ VEE by source

Public Participation

Y (Y/N) Public Noticed. If yes, Public Notice Date: **Wednesday, January 16, 2013**

 N (Y/N) Public Notice Comments. If yes, number and nature of comments:

N (Y/N) Public Hearing. If yes, Public Hearing Date:

EPA Review

Y (Y/N) EPA Review. If yes, Date proposed permit sent to EPA: **Tuesday, January 15, 2013**

 N (Y/N) EPA Comments. If yes, give a brief summary_____.

Comments: The facility requested changes to the permit which include removing a 750 kW generator, and adding 2 large (3000 kW) generators, a 30 kW generator, a water heater, boilers, and humidifier.

NASA WFF is shifting to on-site generation of uninterrupted electrical services for a period of several hours from prelaunch to postlaunch activities. This requires the installation of 2 new large generators rated at 3000 kW each (U-12-01 and U-12-02) which will be used in cases outside of “emergency” operation. The new 30 kW generator will also be used outside of “emergency” operation. As such, these units are not limited to 500 hr/yr.

Permitting applicability was determined by combining emissions of all new equipment at 8760 hr/yr and comparing with exemption limits. Calculations show that the project is greater than exemption limits for NOx and therefore requires a permit. Since BACT applicability is the same as permitting applicability, BACT applies for NOx. The largest contributors for the NOx are the 3000 kW diesel/distillate oil fired generators. (See spreadsheet for details.)

Regulatory Review (cont.)

Pollutant	Project Total	Exemption Limits	Exempt?	BACT Applies?
PM-10	2.9	10	Y	N
PM	2.9	15	Y	N
SOx	0.4	10	Y	N
VOC	9.1	10	Y	N
NOx	407.6	10	No	Yes
CO	52.3	100	Y	N

Originally, the facility wished to keep the existing permit limit on fuel throughput and operate the new units under those limits. However, with the new large generators, it would be possible to stay under the fuel throughput limit yet exceed the emission limit. The facility then requested to change the fuel limits to 500,000 gallons per year each for diesel/distillate oil and LPG (see email dated 10/18/2012) and wished to remain below 79% of maximum source thresholds in order to avoid an annual maintenance fee (see email dated 10/12/2012).

Calculations still showed the 500,000 gal/year, each, of diesel/distillate oil and LPG to be a potential problem with maintaining the desired emission limit of 79 tpy of NOx. It was determined that fuel throughput limits of 500,000 gal/yr of LPG and 485,530 gal/yr of diesel/distillate oil would allow maximum flexibility while staying under the 79 tpy of NOx as requested. (see spreadsheets for details.)

Facility Wide Emissions				
Pollutant	LPG Equipment (combined) at 500,000 gal/yr	Diesel/Distillate Oil Equipment (combined – worst case) at 485,530 gal/yr	Rocket Testing	Total
PM-10	0.3	2.0		2.2
PM	0.3	2.2	11.5	13.9
SOx	0.0	18.0		18.0
VOC	2.1	2.7		4.8
NOx	5.9	73.1		79.0
CO	4.5	12.8	24.0	41.3
Lead			1.0	1.0

Changes in permitted emissions require a 30 day public notice period. This action qualifies as a significant modification because the increase in permitted NOx emissions is greater than the exemption limit.

Note: Due to worst case scenarios used to determine maximum potential emissions for the boiler grouping (condition #15) and the generator grouping (condition #16), these conditions will not equal the facility wide

Regulatory Review (cont.)

emission limits when added together. Each of these conditions contain both LPG-fired and diesel/distillate oil-fired equipment so combining them would be 'double counting' emissions. The fuel throughput limits will ensure that the total emissions shown in the table above are not exceeded for the facility.

Final Recommendation: Recommend Approval.

Permit Writer's Signature:

Air Permit Manager's Signature:
